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American Dyes Institute.

Statement for adequate
protection to the...

[S.I.]

[1920]

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MARSTON T. BOGERT.

BEFORE THE
FINANCE COMMITTEE
OF THE
UNITED STATES SENATE

HEARINGS ON THE TARIFF BILL
H. R. 7456

STATEMENT FOR ADEQUATE PRO-
TECTION TO THE AMERICAN COAL-
TAR CHEMICAL INDUSTRY.

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BEFORE THE
FINANCE COMMITTEE
OF THE
UNITED STATES SENATE

Hearings
on
The Tariff Bill, H. R. 7456

STATEMENT FOR ADEQUATE PROTECTION TO THE AMERICAN
COAL-TAR CHEMICAL INDUSTRY

The situation.

The Tariff Bill as passed by the House leaves the coal-tar chemical industry without any substantial protection. The duties imposed, of 7 cents a pound and 30 per cent on intermediates, and 7 cents a pound and 35 per cent on dyes and finished products, are conceded to be utterly incapable of enabling our new industry to compete with the Germans.

The bill as reported by the Ways and Means Committee contained in addition to the duties, provisions intended to furnish substantial protection. These excluded altogether, for a period of three years, all such coal-tar products (other than crudes) as were made in the United States in proper quantity and quality, and at a fair price. Provisions based on similar principles had been recommended by the Ways and Means Committee, passed by the House, and adopted by this Committee in the last Congress, after hearings at

which many hundreds of pages of testimony were taken, and after consideration extending over many months. The reports of all three committees show that each separately reached the conclusion that the industry is vital to our country, and that no less drastic form of protection would serve. The House, after a debate which could not in the nature of things cover adequately even the outstanding features of so complex a subject, first adopted the special protection paragraphs and then reversed itself, rejecting them by a vote of only 208 to 193. This adverse majority included substantially all the Democrats, so that even in the House the measure commanded the support of two-thirds of the friends of the protective principle.

We therefore desire to recapitulate the facts which led to the previous decisions of the Committees, and to urge that an amendment to the Tariff Bill be recommended accordingly—preferably along the lines of the bill reported by this Committee in the last Congress—so as to ensure the exclusion from import, for a substantial period, of those coal-tar chemicals which are well and cheaply made at home.

I.

The protection desired.

The protection required to sustain the industry as it was offered by this Committee's amended version of the Longworth Bill in the last Congress, is substantially as follows: The importation (except in bond) of all of such intermediates, dyes, drugs, and other coal-tar chemicals, as are found by an impartial body (e. g., the Tariff Commission) to be obtainable in the United States on reasonable terms as to quality, price and delivery, should be prohibited for a substantial period. This exclusion, though hitherto recommended by the Committees for not more than three

years, should, for reasons which will appear, extend for at least five. To prevent the Germans from making impossible, by large present imports, the production here of new products, the quantity importable should be limited to a six months' supply for each consumer. The regulation by which these results are to be attained should be as flexible as possible and controllable by the body which is charged with their administration.

The rates were, of course, adopted as mere adjuncts to the protective provisions operating by way of direct exclusion, which have been struck out. If no direct protection of the selective embargo type is ultimately granted such rates are merely derisory. If the more drastic protection be granted but limited to any such brief period as three years, and the rates be left at the present figures, the industry will be placed in a peculiarly difficult position. The main protection having lapsed, they will have to apply for either a renewal or increased rates. Judging from past experience either one would be excessively difficult to obtain, however strong the case presented. The proper reluctance of Congress to change tariff provisions relating to single industries is well known, and based on sound principles. It will be ruinous to the dye industry, however, if low rates are coupled with brief embargo-protection.

In practice the plan would work out simply enough. The Tariff Commission would, after investigation, issue, and from time to time revise, an Importable List, enumerating the substances, covered by paragraphs 25 and 26, found not to be adequately manufactured here. These would be freely importable by anyone up to the limit of a six months' supply, without license, troublesome formality, or the possibility of discrimination. Any consumer who could not buy a product at home, could import his reasonable requirements of it; and if the List prove in any way erroneous,

could secure its correction without waiting till he needed the goods. The plan of this "selective embargo," therefore, contemplates that no consumer shall be prevented from getting what he needs, or seriously delayed in getting it. It encourages import of all those things which can be imported without ill effect on our industry. By duties upon such imports it provides substantial revenues. It is a temporary measure adapted to an emergency: and it follows the example of legislation to the same purpose already adopted, after wide experience, by France, Great Britain, Italy, and probably Japan, by which our dyes as well as those of the Germans are, with like limitations, excluded from those countries.

It is urged in opposition to our contention, that protection by even a limited embargo is unheard of and un-American. In answer, we need only point out that many instances of embargoes in existing legislation were cited by Senator Watson in his speech in the Senate (Congressional Record, vol. 59, part 4, p. 3456) on February 25th, 1920.

II.

Why a native dye-industry is necessary.

A complete self-sustaining domestic dye and coal-tar chemical industry is indispensable to our national prosperity for five compelling reasons:

(a) Three billion dollars worth a year of American goods cannot be made without its products.

(b) It alone can keep the nation abreast of the progress of science in chemical warfare, and provide and keep available in peace times, an inexhaustible source of explosives and poison-gases needed for national defense.

(c) Without it no real disarmament is possible.

(d) It alone can insure due progress in industrial chemistry.

(e) It alone can provide both personnel and material needed for the advancement of scientific and medical chemistry.

Let us take these propositions seriatim.

a

Dyes are essential to other manufactures.

The figures submitted by the Tariff Commission show at a glance the enormous magnitude of the industries which cannot be carried on without coal-tar dyes and intermediates. These are indispensable for almost all of the innumerable varieties of textiles as well as for paints, varnishes, papers, inks and felts. With the exception of a small proportion of natural vegetable dyes, all of the dyes used in these industries are of coal-tar origin. In addition to these uses, coal-tar products are equally indispensable to drug manufacturers and are the foundation of the one great chemical industry of purely American origin—the manufacture of the so-called condensation products—like Bakelite, Condensite and Redmanol. At the outbreak of the war, all these dye-consuming industries were, and for a generation had been, substantially dependent upon Germany for their supplies of coal-tar material. The small American production of a few colors was itself equally dependent on German supplies, since it was no more than an assembling-industry putting the finishing touches on intermediates made in Germany. Hardly a tenth of our needs could be filled from any non-German source. The entire pre-war production of Switzerland, the

only other considerable dye-exporting country, had it all been available to us, would not have supplied half the quantity needed, to say nothing of the necessary variety. Many indispensable colors could be obtained from Germany alone, and only at such prices as her makers chose to ask.

It is self-evident that in this situation our consuming industries were at the mercy of the Germans, who were, in most of the lines in question, formidable competitors. By withholding supplies, by raising prices, or by furnishing inferior colors, they could at any moment have dealt us a deadly blow. The need for such an attack had not yet arisen. Their consuming industries had not yet reached the point where they could make a serious bid for any such monopolization of the world's markets as their dye-works had attained. But with a few years more of peace, the time may well come. Suppose the German textile-makers have ten years of unimpeded government-aided progress in export trade. Suppose that then they or their government intentionally and suddenly bring upon our textile-makers a dye-famine such as was brought about incidentally and gradually by the outbreak of the war. Where would our textile industry be in a year's time? How could it meet, under those conditions, unrestricted German competition? To these questions the Germans well know that there is but one answer. They recognized it early in the war. On March 13, 1915, Bernstorff, in a dispatch to his government, stated the situation precisely. He said:

"Serial number 432 of March 13, 1915. It is reported to me by Hossenfelder, telegram No. 4, that the stock of dyes in this country is so small that by a German embargo about 4 million American workmen might be thrown out of employment.

(Signed) BERNSTORFF."

Only a complete dye industry can safeguard the national defense.

The world war began as a 100 per cent explosive war. It ended as a 55 per cent poison-gas war. The testimony of General Fries before this Committee in the last Congress shows that at the end of the fighting 55 per cent of all projectiles fired contained poison gas. This trend toward chemical warfare showed so constant and rapid an increase that it is as certain as anything can be that future warfare will be primarily chemical. Facilities for the manufacture of the necessary materials for the conduct of such warfare are thus absolutely indispensable to national defense.

While it is now universally known that a complete dye works can be almost instantly converted into an explosive factory capable of producing unlimited quantities of almost any high explosive, it is equally true but less well known that the same factory can with equal ease be converted to the manufacture of poison gases. The report of the British Commission which inspected the great German dye works after the Armistice discloses that the Germans made every ounce of their poison gases, with one trifling exception, in their dye works, without having to change the factories in any substantial particular. The materials, the apparatus and the men were there ready to their hand. Their dye chemists and dye workmen, as part of their regular equipment, had the necessary technique, which could have been found nowhere else. Accordingly, Germany was instantly ready, without special preparation to provide itself, over night, with all the requisite materials of chemical warfare. No other country had any such facilities, and accordingly the Germans had a start in the race which was almost impossible to overcome.

The provision of the necessary materials is, however, the least important part of chemical warfare. In it, more than in any other form of hostilities, surprise is the vital essential. When the Germans first let loose the flood of chlorine upon the Canadians at Ypres they were within an ace of final victory, which must have been won had they realized their success, or prepared for it upon an adequate scale. Nothing saved the Allies then but the instant recognition of the poison, and the provision within thirty-six hours of improvised gas masks. Chlorine was a simple substance, recognizable by any school boy chemist, and neutralizable with equal ease. The next gas used, however, phosgene, was much more difficult both to recognize and to counter, and only the possession of considerable chemical skill and manufacturing facilities enabled the Allies to escape defeat under the impact of this new attack. The same situation arose, in more and more acute form, with the introduction of each new gas. It was most striking, perhaps, in the case of mustard gas, the great defensive gas of the war. General Fries' testimony shows that it was eleven months after the introduction of this greatest of all defensive gases before the Allies were able to manufacture any of it for use in resisting German attacks, and that if we had had 1 000 tons of it in April, 1918, the great German drive could have been stopped in its tracks. During the eleven months this gas alone was responsible for 300,000 Ally casualties. The problem of its manufacture was originally solved in the little French dye works of the Usines De Rhône, and was finally perfected at Levenstein's dye works in England. If the Allies had had possession of a dye industry equal to Germany's or to that of the United States today, this problem could have been solved in days or weeks, and the eleven months' delay and the 300,000 casualties would have been saved. During this eleven months we worked and spent our tens of millions on the

problem, safely protected by the armies and navies of our Allies. Next time that protection may be withdrawn.

It is, however, in the matter of research that the dye industry is capable of rendering the greatest service to the national defense. The horrible poisons used in the latest fighting were a mere beginning. Each side had already developed others much worse, now concealed and held in reserve. To recognize and offset these will require the very highest chemical skill. Any scientist working with primitive apparatus in the smallest laboratory may at any moment happen upon a gas which for a time at least may furnish an irresistible form of attack. The dye chemists are constantly working and experimenting with every possible product likely to furnish such gases. Chlorine and phosgene are ordinary materials of dye making, and every known form of poison gas, every known antidote and every known substance used in gas masks is within the ordinary field of dye-research. Dye laboratories thus automatically keep abreast of the latest scientific knowledge in this field, and the chemists trained in it are not only more certain than any other scientists to be able to identify and counter any new substance which may be introduced by an enemy, but are also more likely than any other to make the discoveries which have military value.

There can be no substitute for this function of the dye industry. The necessary pure scientific knowledge might be provided at large expense by special Government institutions, but such knowledge would be utterly useless without practical manufacturing skill. Many of the poison gases are so deadly that to make them without killing the maker is a task of considerable difficulty. Many others require large practical experience if manufacturing losses are to be kept down to a point which makes real quantity production possible. No conceivable Government institution which could be maintained in time of peace could provide and keep

in existence a manufacturing staff capable of solving the problems which arise in such manufacture. It is therefore the literal truth that only the nation which possesses a complete dye industry can today keep abreast of the progress of chemical warfare and place itself in a position to resist the chemical attack which may be directed against it by any adequately prepared enemy.

c

Without it no real disarmament is possible.

At their first introduction, poison gases were used without the aid of artillery or any other weapon. The chlorine at Ypres was merely released from compression cylinders and allowed to drift down wind upon the enemy. Although afterward most of the poison gases used were fired in shells from ordinary artillery, the tendency in the last of the fighting was toward a purely independent chemical warfare utilizing no regular military weapon. Projectors had been devised which could be cheaply made in any tube works and which would put down oceans of gases wherever desired at ranges up to a mile. This development was only in its beginning and its possibilities are almost unexplored. Already, however, it would enable an otherwise unarmed nation to place in the field a force which could not possibly be resisted by any opponent not either similarly equipped or else armed to the teeth with all the resources of modern artillery, air craft and machine guns. The Germans still retain intact their colossal chemical industry with all its war expansion. If we destroy every gun, rifle, machine gun and tank in Germany they can still by chemical means alone offer a formidable attack. By the same token, they can enable the Bolsheviks to do the like. So long as this is true no nation which could possibly become involved in hostili-

ties with Germany can dream of cutting down its own military power to any serious extent. We must therefore either be ready for chemical warfare as only a complete dye industry can make us ready, or abandon any idea that the world can safely disarm. In a disarmed world, dye-making nations will be absolutely supreme.

In the present state of the world, all this is more important than ever before. Armaments are going to be reduced. Expenditures on munitions and on the means of making munitions are going to be cut far below pre-war standards. Yet even in the days when Peace groaned beneath enormous armaments no nation could have afforded to maintain in idleness, at all times, plants capable of producing the quantities of explosives or gases needed in this war. Even in those days, the inexhaustible reservoir of munitions which her dye-factories gave to Germany, was an overpowering advantage. Think what such an advantage would mean in an era of disarmament, when the maintenance, in peace, of vast munition plants would be unthinkable. In such a period no nation which lacked a dye-industry could offer any effective resistance to a sudden onslaught by a nation which had one. If, at this time, we deny ourselves a dye-industry, we sow the seeds of war, invite aggression, and offer a defenseless front to the rapacious instincts of the world. If we allow Germany to regain her world-monopoly of dyes, we offer her, as a free gift, capacity for world-conquest.

d

Only a complete native dye-industry can insure the progress of industrial chemistry.

The making of colors is the most complex existing industry. Over 950 colors, each a different chemical sub-

stance, were habitually imported into the United States before the war (Norton Census). Each dyestuff is produced by a separate process, usually of many operations. Each operation produces substances not desired in addition to those which are sought. These by-products, in large works, are simply innumerable. The task of ascertaining their natures and possible uses is overwhelming. Only a fraction of it has been accomplished. The rest presents an unbounded field for the research chemist, whose work in finding uses and outlets for by-products will often determine the success or failure of the business. Moreover, there is an incessant demand for new shades, and for means of adapting old colors to new fabrics and different processes. Here again the research chemist is indispensable. The result is that a complete dye-industry provides a livelihood for many times as many research chemists as any other business, and keeps them incessantly busy acquiring information which is of use in other industries. In a country where dyes are made on a large scale the university student with a talent for research can look forward to a real opportunity in that line, and can hope to make for himself a real career. Where there is no such industry the opportunity is, by comparison, infinitesimal. A real dye industry at the same time stimulates the supply of research chemists, whose training makes them available in other industries, and pours out a never-ending flood of scientific information as to the industrial possibilities of a vast number of substances and processes.

A limited dye-industry, making only a part of the colors demanded by the consumers, has no such effect. If selected colors, only, are made, the makers will choose those which present the fewest problems in the way of the disposition of unwanted by-products, and will devote little work and capital to the development of new products. If, then,

we could firmly establish our existing industry, without providing for its expansion into the making of the whole line of needed colors, we should lose this, one of the chief benefits which the nation can derive from the industry. Research would instantly be reduced to a fraction of its present activity. Stagnation would set in.

e

Only a complete domestic dye and coal tar chemical industry can insure American progress in scientific and medical chemistry.

The research requirements of the dye business are so vast that they far transcend industrial bounds. In seeking the solution of the ordinary industrial problems arising out of poor yields, defective results, or new requirements, the research chemist of the dye-works is constantly led beyond the existing bounds of recorded scientific knowledge. Often before he can commence the task of solving a particular industrial puzzle, he is compelled to explore some whole new realm of the chemical world. As a consequence, the dye-chemists are constantly delving into mines of new scientific material. Accordingly their equipment, both material and intellectual, has to be of the best, so that a great country which makes its own dyes, necessarily has laboratories which, in staff, apparatus and supplies, surpass any required in any other branch of human activity. The workers in these laboratories range far and wide over the whole world of organic chemistry, and their annual contribution of scientific data is of incalculable value.

This is particularly true in medical chemistry, that marvelous field, of which the systematic exploration, barely begun, has recently brought forth such magnificent first fruits. For untold centuries the medical profession has

been pouring into the human system drugs of which next to nothing was really known. Until recently even the difficulty of the subject was unknown. Only of late years have men of science realized the terrifying complexity of the processes of organic chemistry which take place within the human body. No systematic study of these, or of the effect upon them produced by chemicals, was imaginable until the world's knowledge of organic chemistry had approached its present volume. Now the beginnings—post-pored perhaps by the immense results of medical work in the biological field, with its serums and antitoxins—have been fairly made; and the greatest progress has been made not only with the aid of the dye-laboratories, but actually in them. In the laboratory of any great German dye-works, before the war, it was a common sight to see dozens of university chemists, many unconnected with any industry, at work side by side with the industrial scientists. The facilities of the laboratories could be, and were put at their disposal by the owners, without loss. Some of the results were startling. One of these was Salvarsan itself. Ehrlich, its discoverer, convinced that arsenic properly disseminated would kill the germs of the cruelest scourge of humanity, arrived at a theory that arsenic could be so disseminated without injury to the body by the use of one of a group of possible compounds numbering many thousands. There was no way to test this theory except to experiment with and examine each possible compound. Nowhere except in the dye-laboratories were the needful substances and facilities to be found. The laboratories and research staff of the great Cassella firm were placed at his disposal, and there the laborious process of elimination was carried out, and the amazing triumph won.

Indeed medical research is an almost inevitable outgrowth of a complete dye-business. Many of the related

products show powerful therapeutic effects and a number of them have developed into useful remedies. Any number of other by-products, not yet studied from this point of view may turn out to be valuable. Every such discovery is a direct financial benefit to the business: some, like "Aspirin," are more valuable commercially than any known dye. Again, the technique of the dye-laboratories lends itself naturally to the synthesis from coal-tar materials of remedies ordinarily derived from natural sources. In this way many valuable medicinals have been produced at lower cost or of better quality than was previously possible. A notable example is the widely-used substance, Adrenalin, discovered in this country and made here at high cost from the suprarenal glands of animals. The Germans presently proceeded to produce it synthetically from coal tar materials. In general, it is clear that as a stimulus to medical chemistry there is no substitute for a strong dye-industry.

III.

Our industry, if saved now, will suffice.

At the outbreak of the war, patriotic American business men, realizing the consequences of a dye-famine, threw themselves and many millions of capital into the breach, and saved the situation. Tackling the appalling task of developing, under the burden of war conditions, the most complicated known industry, they accomplished wonders. The manufacture of crudes was so vastly increased as to place the raw materials on a favorable basis. Most of the most needed intermediates were soon produced, and the number of finished colors constantly increased. As a result, in 1920 the industry produced nearly all the requirements of the domestic market and exported dyes to the value of perhaps twenty-two millions of dollars.

It is most significant, however, as indicative of our inability to compete with German dyes, that the U. S. Tariff Commission, in its "Census of Dyes and Coal-Tar Chemicals, 1920," at page 14, states as follows:

"The total exports of 'aniline dyes' in 1920 was \$22,450,480, which was more than 100 per cent increase over that of 1919. * * * In the first four months of 1921 the exports of 'aniline dyes' showed a rapid decline, receding from a value of \$943,595 in January to \$305,760 in April. This represents a large decrease from the average monthly export of \$1,870,873 in 1920 and was undoubtedly chiefly due to the appearance of German dyes, either directly or through re-export of reparation dyes, in the large export markets of the world, such as China, India and Japan." (Italics ours.)

Today more than three hundred and sixty of the nine hundred odd colors used in 1913 are made here, and many others are in course of production. Production of some of the most desirable dyes, notably the very fast vat dyes, was delayed by the German-owned patents, which prevented their manufacture here. These vat dyes are now being commercially produced in large quantity. Many of the missing dyes are used in such small quantities or are so easily replaced by other satisfactory dyes that their production has necessarily been postponed. It is clear, however, that unless progress is checked, the factories of this country should produce within five years dyes capable of accomplishing every possible needed result. Prices are still high, but this, while the industry is new, is probably inevitable. Inexperience frequently results in producing yields of only a fraction of what they should be. The business, in this respect, is utterly different from ordinary mechanical manufacturing. A builder of machines, a maker of textiles, a paper-manufacturer buys his raw materials knowing that

he will produce from them in finished goods nearly 100 per cent of the possible product. Even pieces spoiled in manufacture, are often, as in the steel business, as useful as ever in the capacity of raw material. In dye-making, however, the situation is utterly different. In each step of the complicated processes used, chemical reactions take place which destroy the original raw materials, replacing them with others, only a few of which are desired. Consequently, the consecutive losses multiply. The proportions of the desired products obtained at each successive step vary enormously with the conditions, and with the details of the methods used. Half a dozen slight variations of process—tricks of the trade—may change the yield from ten per cent of the capacity of the raw materials to sixty or eighty per cent. In one case, testified to by Mr. Klipstein before this Committee, his yield, which after many months of experiment, had remained obstinately at 10 per cent, was increased overnight to 90 per cent by merely slowing down the mixing paddles in one vat from 65 revolutions a minute to 60. The Germans in forty years of work forced their yields up to very high figures, but theirs also began low. Our makers can do the same, but the knowledge of how to do it is not to be found in the books. It can be gained only by experiment, and if the nation wants such knowledge, it must give the makers time in which to gain the needed experience.

In the statistics submitted by the Tariff Commission will be found figures indicating the present magnitude of our new American industry. These demonstrate, we submit, that it is worth saving.

IV.

Why the industry needs and deserves help.

It deserves help because the large investment now locked up in its plants represents a bold and patriotic effort by

many citizens to meet a national emergency. As will appear, the risk they took was so obvious and so great that many of them must have been actuated more by patriotism than by hope of gain. It also deserves help because, though protected hitherto by the war and by the present license system, it has consistently reduced prices during the last three years.

It needs help because the industry is up against the most formidable and unscrupulous opponent and competitor in the commercial world. The German industry, self-contained, favored by nature with materials as cheap as any, labor, transportation and technical service, and aided by the Government, has a start of forty years in the race—an incalculable advantage in knowledge and technical skill. It has always waged ruthless commercial warfare by means of destructive underselling, full-line forcing, direct bribery and many other corrupt practices. Its plants are organized on an enormous scale, several employing (even in 1913) each as many men as the largest three American works together have ever employed and producing such quantities as satisfied the requirements of the whole world. In November, 1920, one German firm (the Badische) employed 30,000 men, or 7,000 more than the largest number ever employed by all our works. In 1916 this huge industry, realizing its danger, consolidated into a single gigantic trust, organized avowedly to fight for the recovery of its foreign markets. The assets of this commercial monstrosity, figured from the last available Berlin stock quotations, may be fairly valued at over four hundred million gold dollars. It is receiving all the aid the new Government can give it. For example, the German Ministry of Industry has abolished the export duties on aniline and other coal-tar dyes, alizarine dyes and artificial indigo. (See "Dyer and Textile Review," issue of May 15, 1921.) Again, the German Government has ar-

ranged to refund to German dye-exporters the 26 per cent Reparation Levy exacted by the British "German Reparation (Recovery) Act." (See "Chemical Age," issue of May 28, 1921.) In November, 1920, the German Trust formally complained to the Reparation Commission that the failure to withdraw Reparation dyes was interfering with business by clogging their warehouses. Since the Reparation dyes then constituted but 25 per cent of daily production it is evident that the Trust's warehouses were nearly full without them, and that accordingly it has large stocks, unsalable elsewhere, to use in commercial warfare upon our industry. Unless miracles happen the Trust will fight more ruthlessly than ever. Indeed, it must. France, England and Italy, determined to have their own dye-industries, have closed their doors to German dyes. An industry equipped to supply the world cannot be operated to supply only the German market, and still live. Is it not as certain, then, as anything in human experience, that the German Trust will stick at nothing in its effort to regain its great American market, and kill a competitor for the market of the rest of the world? We submit that it is; and that if the American industry is left to shift for itself, it will be "spürlos versenkt."

The fact is, that the attack has already begun, and begun in a manner which illustrates not only the extent to which the Germans will and can go in price-cutting but the merciless extortion which the dye-consuming industries can expect from them hereafter if our industry be killed. Take for comparison two colors as classified in Norton's Census, Indigo R. B. and Victoria Blue B. These were both cheap enough before the war, the average import prices for 1913-14 as given by Norton being respectively 37 7-10 cents and 31 2-10 cents a pound. In 1920 Indigo R. B. began to be produced in this country. The average import price for the

calendar year 1920 thereupon dropped to 29 cents or about three-fourths of the pre-war figure. On the other hand for the Victoria Blue B. which was not made here in sufficient quantity, the average import price for 1920 rose to \$2.86. This is but one of scores of instances which show that while German prices on dyes which are also made in America may be on an average but two or three times the pre-war figures, they are multiplied indefinitely when relieved from American competition.

And our industry needs help not only against German aggression. The Swiss industry is also a grave danger. The Swiss, too, have a start of many years, and the benefit of a huge accumulation of knowledge. The German commercial penetration of Switzerland has not ceased. How far its influence extends no man knows: but it will be easy for the huge German Trust to form an alliance with its little neighbor; or failing that, to disguise its goods as Swiss.

V.

Why no other remedy will serve.

Only three other remedies have been suggested—a high tariff, anti-dumping laws with a strict corrupt practice act, and the application of the Anti-Trust law.

The tariff alone will not save our industry, because the German Trust is at the same time too strong and too desperate. Though its costs, like ours, may have been increased by the war, it can still undoubtedly produce far more cheaply than we, if only because its superior experience, resulting in vastly greater yields, enables it to make out of any given quantity of raw materials, and with any given amount of labor, far more dye than our makers can now obtain. Its size and compactness of combination—impossible to our makers under our Anti-Trust Law—

also give it huge advantages. It can and does avoid the immense wastes from which we suffer in the way of duplication. Where we waste a dozen sets of research and plant to produce in as many factories an intermediate for which the market can support but one or two makers, they confine the work to one, which gets assistance from all.

Again, the trust's resources (conserved by profitable war work) are enormous. It well knows that it must regain our market or find other and less profitable business, for a large part of its plants. Clearly, then, it is in a position where it can, and must, practically give its goods away for a year or two, if thereby it can kill off domestic competition. No matter what tariff is imposed, short of a specific duty equal to the price of domestic goods, the German prices could be cut as a measure of wise business management, low enough to compel our makers to sell at a loss. Our industry is in no position to meet such competition. It has no such stake in invested capital to be protected at any cost. It has no such resources to fight with. Its workers have recently been in other occupations and will not, therefore, as the Germans probably will, stick to an endangered industry because they have never been in any other and are reluctant to begin life anew. It cannot at this time, or until it has had an opportunity to gain experience, beat such an opponent by fair fighting, and it will not adopt the enemy's methods.

Most important of all, there is a simple method by which the Trust can infallibly destroy our industry by the expenditure of at most a few millions, a sum which, regarded as insurance of its vast investment, must be deemed nominal. This is the method of *selective attack* by which our makers may be picked off one by one. The fact is—and it is obvious to the Germans—that no one of the American dye-makers makes money except on a few dyes, most of

which are not produced in large quantity. The dyes which have been recently introduced (a class which includes the great majority) are necessarily made at a loss, owing to the huge losses resulting from inexperience and to the expense of continuing research. The great bulk dyes, and almost all the older products, are made by so many companies, whose competition has been so keen that prices have been forced below the profitable level—in the case of the greatest, sulphur black, nearly to pre-war figures. Between these extremes lies the few money-making products, those which, by some accident of process, situation or market, one maker makes better or cheaper than others. To kill off our greatest company all that would be needed would be to import and sell at whatever sacrifice was necessary, a year or two's supply of its money-making products. To show how small this undertaking would be it is only needful to recall that a year's supply of all dyes for the whole country—30,000 tons—makes only three shiploads, and that nearly half this annual consumption consists of two colors, indigo and sulphur black, each of which is the subject of the keenest competition among many domestic producers. It would not be necessary to attack in this manner more than one or two of our producers. If it were once announced that nothing but a tariff stood between them and the Trust, most of our seventy or eighty small companies would go out of business forthwith. One or two demonstrations would convince the rest.

It will not do to say that anti-dumping laws and corrupt practice acts will prevent the underselling by which such attacks must be carried out. Once the dyes are in the country it will be almost impossible to follow them. Secret sales and secret rebates may be made in a thousand ways which can hardly be detected. The Germans have always been past-masters of such tactics.

As applied to so complex an industry as dye-making anti-dumping laws all have the same defect—they shut the door after the horse is stolen. All depend on ascertainment of either foreign costs or foreign prices. Foreign dye-costs are usually impossible of ascertainment, because almost every dye is so involved with valuable by-products, which are unavoidably produced in making it, that its cost is a matter of arbitrary bookkeeping. German dye-prices, in view of the absolute power of the Trust, can be manipulated at will. Worst of all, the comparison with foreign prices can be made impossible in a thousand ways by disguising or really altering the product so that the precise thing sold, having never before been sold anywhere, can have no market price. It is easy for the German chemists to turn almost any dye into what is at least apparently if not really a new product, by additions or slight alterations which do no harm. By these methods the effect of any possible anti-dumping law may be avoided. But if this were impossible such laws would be too slow to help. They require proof before they can be made to act; and to get proof out of the German dye-works will be the work of years.

Finally, anti-dumping laws would fail to afford the necessary protection because their only effect is a relatively small increase of duty. This would merely increase by a comparatively small amount, the cost of the selective attacks by which our industry could and would be destroyed. No such small and contingent extra expense could possibly stop or delay the German Trust in its fight for life. If our industry is to have no better shield than such legislation, it may well be killed before ever the protection becomes available.

The same may be said of the Anti-Trust law. To prove that particular goods are the product of the Trust can be made infinitely difficult, and we can trust the Trust to do it. Till such proof is produced, the law will not operate.

VI.

The Bill as reported to the Senate by this Committee in 1920 as a substitute for H. R. 8078, furnishes the necessary protection without damaging anyone.

If continued for a longer period, and amended so as to exclude from import those dyes not now made here which are of no value except as mere substitutes for satisfactory domestic products, the plan as embodied in the Finance Committee's substitute bill of 1920 will obviously do the work. Carefully administered, it can certainly save our new industry. The only question, then, if we assume that the industry ought to be saved is, what harm the proposed legislation could do.

We submit that it can harm no one. Under it, every consumer can import whatever he really needs and cannot otherwise get. If his foreign competitors gain an advantage by getting any particular German dyes he can be given the same advantage. The system is flexible.

Much was said by the opponents of special protection, particularly when a license-system like the British was under discussion, to the effect that it would prevent the textile maker from knowing beforehand what dyes he could get, and thus cripple his business by making it impossible for him to send out samples and take orders months beforehand. This Committee's substitute bill, by abandoning the license-system obviated this objection; but the fear has now been demonstrated to have been baseless. Under the existing temporary license-system now enforced by the Treasury Department, the dyes not obtainable in the United States are procured by the consuming industries so that the seasonal sales of goods are proceeding as before the war.

VII.

If we do not adopt some such direct-exclusion measure we shall be left alone to fight not only the German Trust but also the industries of the Allies.

England and France have protected their new industries by stringent license systems. Italy, after watching the results, has just adopted a similar law. Each is developing as fast as possible, mostly with the aid of direct government subsidies, her own dye-industry. Each now excludes our dyes except as imperatively needed. Each will naturally seek an export market, at the same time keeping up the bars against our products. Are we, then, to "hold the bag"? Are we to let in British, French and Italian dyes as well as German, though those nations keep ours out? That is an arrangement which seems to have no legitimate appeal either to the patriotic or the economic sense. We may not value British, French and Italian precedent as an example: but we must value it as a warning.

From every point of view, then, a direct exclusion or selective embargo law suggests itself as the inevitable answer to the pending question. It is the one safe, certain remedy which will insure to the country the permanence of the industry on which more, perhaps, than on any other single branch of human activity, our economic and scientific progress and our national security depend.

VIII.

Reply to objectors.

Since the hearings before this Committee in the last Congress, the main attack upon the proposed protective measure has taken the form of unmeasured denunciation (unaccompanied by any suggestion of proof) of the American dye makers as monopolists and members of a trust.

It is submitted that the facts disclosed in the Tariff Commission's Census for 1920 (Tariff Information Series No. 23) dispose of this accusation once for all. These show that whereas in 1913 we had four or five dye-making concerns we now have eighty-two, while the makers of coal tar and organic chemicals, generally, have increased to one hundred and seventy-one. Among these there is no interlocking of stock ownership, or of directorates, as will be shown by a statement signed by sixty or more of the smaller makers showing their entire independence, and that they have not encountered any American monopoly. The fact that competition is keen and earnest is demonstrated by the tables appearing at page 33 of the census above referred to. These show that 92 per cent of the American dye production in 1920 consisted of dyes made by three or more firms, while more than 50 per cent of the production consisted of 35 colors, each of which was made by seven or more firms. No trust or monopoly outside of Bellam, exercising any control over an industry, ever permitted or would permit such competitive duplication as that. The whole cry of an American monopoly is pure myth, the last desperate resort of those who realize that in fair argument their case is hopelessly weak.

At the hearings before the Committees of the last Congress, every witness who appeared in opposition to the bill was apparently in agreement on two propositions: First, that the dye industry ought to be protected; second, that any increase in the cost of dyes which might be occasioned by such protection would be of no consequence to any one, because the cost of dye stuffs forms so small a proportion of the cost of finished goods. The opponents were also substantially unanimous in asserting that even the then American production of dyes was entirely satisfactory for the bulk of their requirements and that they needed only a com-

paratively small number of dyes for special purposes and needed these only to meet the competition of foreign goods which might thereafter come into the country dyed with dyes not then obtainable in the United States. Since the hearings the number of imported dyes needed has been materially reduced by the introduction of new domestic products including several of the important vat dyes, which were then the missing colors most urgently needed. Except the importers, no one appears to have suggested that the exclusion from import, for a time, of all those dyes now made here in perfectly satisfactory quality and quantity would injure the business of any consumer. The argument of the objectors was devoted to two propositions: First, that a high tariff would furnish all protection needed, and, second, that any additional protection was dangerous to the consuming industries. For the convenience of the Committee we may summarize these arguments and our replies as follows:

1.

As to the sufficiency of protection by tariff.

The opponents of the various direct-exclusion measures assert:

(a) *That in the manufacture of the dyes which constitute 80 per cent of the present American production our manufacture is so far advanced that a tariff would protect.*

The testimony before this Committee shows that this is wholly untrue, because the manufacture of the well-established dyes cannot, in many cases, be profitably carried on unless other dyes produced as by-products can be disposed of to advantage. No witness who had any familiarity with the manufacture of dyes gave any support to the proposi-

tion. The idea that a tariff would protect most American dyes is based on the rapid reduction in price of certain bulk American products which has taken place. This, however, has been brought about by domestic competition. It is reasoned by the objectors, nevertheless, that because sulphur black, for instance, is sold at prices with which the Germans would probably find it comparatively unprofitable to compete, this product could be protected by a duty. The fact is, however, that sulphur black is cheap because of a large competitive domestic production which has resulted in sales below the costs of some manufacturers. The fact is that no American dye maker could sell any of the bulk products in question at anything approaching his present prices if he were not able also to sell at higher prices other products the production of which is facilitated by the manufacture of the bulk products. The dye industry, in fact, is single, and cannot be treated as if it were a collection of separate industries, one for each product manufactured. The products are hopelessly interlocked. If the makers' market for even a few products be cut off it will inevitably render impossible the economical manufacture of many others. A tariff, therefore, apparently capable of equalizing the present American and German prices for many products would utterly fail because the withdrawal of a market for other products not capable of protection by such duties would make impossible the production at present costs of the products in which the greatest manufacturing advance has been effected.

More important than all this, however, is the certainty that a tariff could not possibly protect the products new to American production which are just coming on the market, and those which will later follow in natural sequence. Unless we develop these dyes now lacking in our American manufacture our industry will not only be stagnant and lifeless, but will lose its chief value to the country. A sta-

tionary industry requires little research, and one which cannot fill all the wants of the consumer is at the mercy of any foreign industry which can.

(b) That until now our dye makers always said a moderate tariff would protect their industry and that those who said this do not now deny it.

The statements referred to were made before Congressional Committees, in the 1916 and earlier tariff hearings, by dye makers who knew nothing of a real dye manufacturing industry but only understood the small assembling industry which was all we had in this country up to 1915. Moreover, is it not true that none of the manufacturers who formerly said a tariff would do the work have since denied it. Dr. Jayne and Dr. Matthews, two members of the 1916 Committee, appeared before the House Committee in favor of this bill and they only refrained from testifying before the Senate Committee in deference to the Chairman's request that testimony be not duplicated.

(c) That since the dye makers told the 1916 Committee that a tariff would do, the changes in the situation have been favorable to the American and unfavorable to the German industry.

One change unfavorable to the American dye industry has taken place, the importance of which outweighs all other variations in the situation. The formation of the single German trust, and the doubling of its capital, by the sale for cash, of new stock, have produced an enemy to the American industry more formidable than any which confronted it, and the desperate plight to which this gigantic German kartel has been driven by the adoption of the license

plan in Great Britain, France and Italy makes certain a ferocity of competition which the American industry in 1916 could never have foreseen.

(d) *That American dye makers have made large profits and that, therefore, they are in a position to survive.*

Under the total embargo brought about by the war, only a few companies have made profits at all and such were going concerns in 1914 and were able to begin real manufacture at any early date. These, by risking large capital investments, which would have been worthless had the war ended abruptly, were able to supply the bulk needs of the simpler colors and thus save the consuming industries of the United States. It may be true that they have been able already to write off the greater part of their plant expenditure. This, however, is necessarily normal practice for concerns engaged in dye making. The obsolescence of plant is so rapid, and rebuilding is so frequently required, that unless a plant can be written off or at least written down with reasonable promptness, the business cannot be established on a sound basis.

(e) *That our exports of dyes show that our industry is beyond the infant stage.*

These exports show only the universal shortage of such products in the whole world outside of Germany. We have been the only country which, during the war, has had time and money to devote to this industry. The rest of the world which had to have dyes could find no surplus of any non-German dye anywhere except in the United States. Unfortunately, however, these exports have now, with the revival of German export, taken an abrupt and ominous drop,

as heretofore shown by the report of the Tariff Commission.

(f) *That in addition to tariff, the industry has or will have other forms of protection:*

(1) *The Chemical Foundation.*

The protection offered by the Chemical Foundation's patents is purely future and doubtful at that. Less than ten per cent of the dyes imported before 1914 were covered by the patents. These patents are expiring rapidly, so that only a fraction of those covered in 1914 are still covered. Moreover, ownership of the patents will not prevent importation. It will merely give a right to collect royalties after the imported patented articles are sold in this country. With this very limited protection the native industry, unless saved by legislation, will be destroyed.

(2) *Reparation Commission.*

It is constantly asserted that the Reparation Commission under the Versailles Treaty controls the situation and protects the American industry, yet all that the Reparation Commission controls is 50 per cent of the stock of German dyes available when the Treaty became effective (long since distributed) and 25 per cent of new production during five years. The remaining 75 per cent of the present German production are absolutely free and can be used by the Germans as they see fit. The Reparation dyes will perhaps take care of the real needs of other countries and most of ours: the balance except the small fraction needed for Germany (perhaps 10 per cent of her normal production) is available for commercial warfare.

As to the alleged dangers of the proposed special protection.

Its opponents condemn the Plan because

(a) *It is said the Commission could not determine whether the quality of American dyes was good enough without proceedings amounting to a litigation.*

The difficulty of this question is enormously exaggerated. Each dye (except mixtures) is a definite chemical substance, as definite as common table salt. This is true, although the exact chemical constitution of some is not precisely known. The maker either succeeds in producing this particular substance, or he does not. If he produces it, and turns it out in reasonable purity and proper strength, it cannot help doing the same work as the same substance produced anywhere by any one. Accordingly, if a given dye is really produced here, it cannot help fulfilling every purpose which the similar German dye can fulfil. The question as to whether the American dye is good enough is thus not an ordinary question of quality, largely matter of opinion, but a question of identity or purity. The Tariff Commission as a practical matter would only have to ascertain whether the American dye was the same substance as its German prototype, and whether it was equally pure. These are questions of fact for a chemist leaving little room for argument.

(b) *It is said that the plan forms a bad precedent for future legislation designed to protect American industries.*

The purpose of the Congress is certainly to protect adequately the American organic chemical industry, of over-

whelming national importance as it is. Much as we may dislike to exhibit our national shortcomings in trade or in industry, we have no complete organic chemical industry in the United States and are just beginning to develop one. That such an industry is absolutely necessary and is confronted with most dangerous foreign competition, all seem to admit. The fact is, no other substantial industry is so young in America. In 1914 there were not ten completely trained organic chemists in the country, and not five hundred workmen or foremen who could perform the simplest operations in an industry of such infinite complications as the organic chemical industry. Experience and education, and not money alone, can overcome these deficiencies. With the complex nature of production in the organic chemical industry, and the ability of the foreign manufacturer to distribute his extremely low costs over a range of products not yet manufactured in America, it is easy to see that tariff rates alone will not keep the great German monopoly from destructive competition with our products. Today our industry is slowly building up, and with such beneficial legislation as may be devised for its protection, must do battle with foreign competition. Such an extraordinary condition requires an extraordinary form of protection.

(c) *It is said that the consumers will be seriously injured if British and French goods dyed with German dyes come in while the makers of our goods cannot get them.*

Of course they would: but the whole theory of the proposed measures is to permit—indeed compel—the admission of every German dye which excels the native product. The danger is therefore remote. The fear, however, proceeds on the curious assumption that the Tariff Commission in administering the plan would not do its duty. If, as com-

manded by each of the three measures which have been reported out, it makes admissible everything unobtainable in this country in proper quality, etc., the danger can never arise. If the plan is an impediment at all, it is one from which the British and French textile-makers will suffer also: and they are more dependent upon specialties requiring particular high-grade colors than are we, and their legislation compels them to rely chiefly on their domestic dye-industries which are far less advanced than ours.

It must be noted that the fear of German textiles dyed with German dyes is no argument against the measures. Under her reparation burden Germany must export to live. Her textile industry is capable of many times as large exports as can possibly be made of dyes. If any particular German dyes can give German textiles such a superiority as to enable them to outsell our goods in any market—here or abroad—we shall never get an ounce of those dyes, whatever our legislation.

When all the detailed arguments are made and answered, however, the Committee, we believe, will find itself driven back to first principles. With the testimony and documents before it, it is in better position than either dye-makers or textile-makers to decide what is good for the country and for them. The considerations which should govern the final decision are, we submit, these:

FIRST: Now, and now only, can we secure a real dye industry. While the Germans retain their present advantages, and the power and necessities of the great Trust compel that attack which we deem inevitable, their commercial warfare will instantly kill our industry unless whatever protection is provided is truly efficient. Once killed it could never be revived. If it be not saved now and pro-

moted as well as protected, American capital will never again go into it, and a world-monopoly will be handed back to Germany for all time. The fact that we can now through the Reparation Commission, force delivery of such German dyes as are really essential, makes this the psychological moment. At any time when the Kartel can exercise pressure by refusing supplies of necessary dyes, it can, until our industry is complete, and able to supply or replace those dyes, destroy it at once.

SECOND: Since it is certain that there will never be another opportunity to provide the United States with a real dye-industry, it is the duty of Congress, if it believes such an industry to be essential, to take no chances. The stake is too great for any gamble; and to adopt any method of protection with doubt as to its efficacy is to gamble with an interest vital to the whole country. According to the overwhelming weight of the testimony, we submit, no tariff practically enactable can furnish the protection needed. The evidence of the opponents of the bill, even taken alone, would only show that a high enough tariff *might* protect. They urge adoption of a method which even they cannot deny to be of doubtful efficacy. In this matter, then, the country is like a man walking on a railroad track, who, as he comes near a trestle, sees a train coming. He thinks the train is probably not coming fast enough to catch him before he gets over that part of the trestle which offers no place of safety; but if he has any wisdom at all he will not stake his life on his guess. He will take the safety-path provided for him beside the trestle, so that no matter whether he has guessed right or wrong he will pass on unharmed.

THIRD: Only the complete protection and efficient promotion of our dye-industry can insure the safety of the tex-

tile makers themselves. As long as the German industry is in one single hand, and that hand at the disposal of its Government, it can and will be used to further any national ambition. In 1915 Germany sought by an embargo to starve our textile men into forcing our government to take a hostile attitude toward Great Britain. The plot nearly succeeded. It failed chiefly because, having no foreign competition during the war, our dye-consumers never felt the full pressure intended. What was done in 1915 to force the hand of Britain can be done at any time unless we have a dye-industry, to destroy our textile industries for the benefit of their German competitors. See how the mere possibility of being delayed in getting a few relatively unimportant colors which competitors may have, alarms the textile maker. The German agents have had only to suggest such a possibility to create opposition to tariff bills in the past and to the various special protection bills in the present. Only the existence of our dye-industry today stands between our dye-consuming industries and complete German domination. The dye makers of America have saved the business of the dye-consumers. If they could not get American dyes our textile men would have to take German dyes on any terms which might be imposed; or the Germans might withhold their best dyes altogether and seek that export trade, which they must have, in the larger field of textiles. The Committee can see this, as perhaps the manufacturer, with his outlook narrowed by nearness to the difficulties of his task, cannot.

FOURTH: If capital is to be attracted into and kept in the dye-industry the necessary special protection must be assured for a period long enough to permit the development of most of the missing dyes. The testimony leaves no real doubt that three years is wholly inadequate. Moreover, a

longer period need alarm no one. If the law works, the industry, stimulated by immediate capital additions, will expand so fast that nearly all the dyes will be made within a comparatively short time, in which case few imports will be needed or desired. If it doesn't work, it will create a weight of textile opposition which will result in prompt repeal.

No matter what Congress does, the textile makers are certain to have their supply of dyes subject to some outside control. If Congress does not enact this or some equally effective selective embargo, they will be subject to license issued or withheld at will by one man—the head of the German dye-trust. Except for the Reparation Commission supplies, which may be wholly insufficient on the most important products, not one ounce of German dye can be bought by any American without the permission of the German Trust. Give them, by refusing necessary protection, hope of re-establishing German domination of our markets, and they will use this power relentlessly to further the trust's purposes. Show them by granting what is needed, that Germany is never again to be given control, and they will have no motive to refuse any reasonable offers of purchase.

Respectfully submitted,
AMERICAN DYES INSTITUTE.

MSA # 22057

**END OF
TITLE**